UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,780	10/05/2000	Flemming Andersen	AUS9-2000-0494-US1	8700

7590	03/10/2004	

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EXAMINER
PHAM, THOMAS K

ART UNIT	PAPER NUMBER
2121	3

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)	
Offic Action Summary	09/679,780	ANDERSEN ET AL.	
	Examiner	Art Unit	
	Thomas K Pham	2121	

-- Th MAILING DATE of this communication appears on th cover sheet with th correspond nce address --

Period for R ply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 October 2000</u>.
2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-5,7-11 and 13-17</u> is/are rejected.
7)☒ Claim(s) <u>6,12 and 18</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>2</u>.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

Notice to Applicant(s)

1.   Claims 1-18 of U.S. Application 09/679,780 filed on 10/05/2000 are presented for

examination.

DETAILED ACTION

Drawings

2.   New corrected drawings are required in this application because the drawings are

informal. Applicant is advised to employ the services of a competent patent draftsperson outside

the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The

corrected drawings are required in reply to the Office action to avoid abandonment of the

application. The requirement for corrected drawings will not be held in abeyance.

Specification

3.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

        The abstract should be in narrative form and generally limited to a single paragraph on a
separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed
150 words in length since the space provided for the abstract on the computer tape used by the
printer is limited. The form and legal phraseology often used in patent claims, such as "means"
and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist
readers in deciding whether there is a need for consulting the full patent text for details.

        The language should be clear and concise and should not repeat information given in the
title. It should avoid using phrases which can be implied, such as, "The disclosure concerns,"
"The disclosure defined by this invention," "The disclosure describes," etc.

4.   The abstract of the disclosure is objected to because it exceeds 150 words in length.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-5, 7-11 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Selvidge et al. U.S. Patent no. 5,659,716 (hereinafter Selvidge).

Regarding claims 1, 7 and 13

Selvidge teaches processing logic operations of a network model, comprising: partitioning the

logic operations in the network model into a plurality of domains, wherein a domain has a

respective total number of operations (col. 5 lines 13-17, "The netlist 20 is ... by the interconnect

14"); identifying, in the respective domain orderings, instances of multiple operations having

dependencies on respective common source operations from other ones of the domains (col. 10

lines 25-32, "This is best solved ... the outputs depend") but does not specifically teach ordering,

in first domain orderings, the operations of the respective domains, wherein each operation has a

rank and determinable numbers of operations between it and each respective one of the other

logic operations of the domain; ordering, in second domain orderings, the operations of the

respective domains, wherein pairs of the operations having the common dependencies are

separated by at least as many operations as the total number of operations in the domains of the

respective source operations, so that after one value is computed for one instance of an operation

depending on a source operation, a next value is computed for the source operation before

computing the next instance of an operation depending on the source operation. However,

Selvidge teaches the logic netlist is usually generated with hardware description language or schematic capture language for issues instruction between logic partition blocks (col. 10 lines 3-11, "implemented during the compiling ... schematic capture program"), determined the link depths of the global links for prioritizing the routing of the global link (col. 3 lines 38-42, "determining link depths ... the respective link depths") and at least one pair of operations have a common dependencies according to the dependencies analysis of the global links between logical partition blocks (col. 10 lines 25-32, "This is best solved ... the outputs depend"). Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made for using the programming languages of Selvidge to issue communication instructions between logical partition blocks, determined priority of each operation in order to associate the number of operations involved, and determined the dependencies between operations to assure that all outputs depend on all inputs for gates library parts only.

Regarding claims 2, 8 and 14

Selvidge teaches one of the second domain orderings includes at least one waiting operation between a pair of the logical operations of one of the first domain orderings (col. 6 lines 3-14, "A time interval ... next target clock period transition").

Regarding claims 3, 9 and 15

Selvidge teaches ordering, in a first merged ordering, the operations of all the domains, wherein the first merged ordering is responsive to the respective domain orderings (col. 8 lines 43-53, "the internal logic ... off into three children").

Regarding claims 4, 10 and 16

Selvidge teaches the first merged ordering omits any waiting operations that are in the domain

orderings (col. 7 lines 26-34, "One way of visualizing ... no congestion at the chip pins").

Regarding claims 5, 11 and 17

Selvidge does not specifically teach ordering, in a second merged ordering, the operations of all

the domains, wherein the second merged ordering includes separations between pairs of the

operations having a common dependency, the separations being of at least the extent as the

separations of step d). However, Selvidge teaches at least one pair of operations have a common

dependencies according to the dependencies analysis of the global links between logical partition

blocks (col. 10 lines 25-32, "This is best solved ... the outputs depend"). Therefore, it is obvious

to one of ordinary skill in the art at the time the invention was made for using the programming

languages of Selvidge for determining the dependencies between operations in order to assure

that all outputs depend on all inputs for gates library parts only.

Allowable Subject Matter

7.   Claims 6, 12 and 18 are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to examiner *Thomas Pham;* whose telephone number is (703) 305-7587 and fax number is

(703) 746-8874, Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact
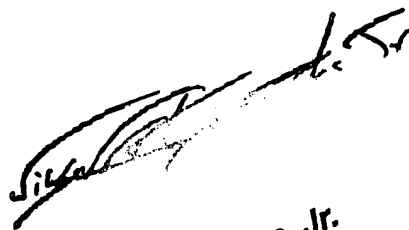
Supervisor *Mr. Anil Khatri* at *(703) 305-0282.*

Any response to this office action should be mailed to: **Director of Patents and**

Trademarks Washington, D.C. 20231, or **Hand-delivered** responses should be brought to

Crystal Park II, 2121 Crystal Drive Arlington, Virginia, (Receptionist located on the 4th

floor), or fax to the **official fax number (703) 872- 9306.**

Any inquiry of a general nature or relating to the status of this application should be directed to

the Group receptionist whose telephone number is (703) 305-3900.

Thomas Pham
Patent Examiner

TP

March 7, 2004

Wilbert L. Starks, Jr.
Primary Examiner
Art Unit · 2121